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POLITICAL ECONOMY.

[Home-Talk by J. H. N., Oct., 1852.]

THE science of Political Economy is divided into the two great departments of *Production* and *Consumption*. The term *Production* may represent not merely agricultural products, but manufactures and improvements of all kinds, including transportation; and the term *Consumption* denotes the operation by which the various products are used and consumed.

The use and enjoyment of things, i. e., consumption, is considered desirable in itself. People do not have to be hired to eat, drink, wear clothes, &c.: there are plenty of volunteers for all this. But the business of production is considered hard and irksome, and has to be paid for.

These two departments of production and consumption, correspond to the male and female elements—to giving and receiving. Consumption in all its branches is receiving, and production in all its branches is giving. Now Christ says, "IT IS MORE BLESSED TO GIVE THAN TO RECEIVE." If this principle is true in the nature of things, and people can be brought to believe it, then there will be more volunteers for production than there are for consumption: it will be more attractive to produce, than to eat and drink.

When this doctrine is universally received, money will cease to be a necessity. People are not hired to do table-service. Cheerfully, without compulsion, and with great regularity, they go to the table, and labor effectually for a considerable time—particularly in England. Now if Christ's saying, "it is more blessed to give than to receive," be true, then the time must come when hiring service will be displaced by volunteer service, and thus money, as an equivalent for labor, will pass away. This time has even now come, in a certain sense, with us: we do not recognize money as a suitable reward for labor, and have no use for it, except in dealing with those outside of our Association.

We already see this principle at work in the world with reference to some things. Fishing is one form of production; and an *amateur* in the business would no more think of being hired to fish than to eat. All production may be made as attractive as fishing is to an amateur sportsman.

With money, will also pass away the present burdensome system of *account keeping*. An organization, based on the principle that it is more blessed to produce than to consume, must inevitably constantly increase its capital. It may be important, so long as there is any uncertainty on this point, to keep exact accounts; but when it has become a fixed fact that income exceeds expenses, what necessity will there be for keeping accounts? If they are kept, it will not be from necessity, or to guard against deficit, but only for the curiosity of ascertaining how fast accumulation takes place.

These principles of political economy settle the question how the world of business, with its manufactories, railroads, steamboats, &c., is to be conducted without the stimulus of money. If a man has breadth of life and power of sympathy enough to stand on the platform that "it is more blessed to give than to receive," and so throw his interest into all the enjoyment that takes place in consequence of his productions, he will be immeasurably more happy than he would be to simply try to enjoy himself in consumption. Here, then, is a stimulus stronger than money.

The words of Christ that we have quoted are generally applied to "giving to the poor;" but this interpretation presents only a partial view of the meaning of the text. In order that a man may *give*, he must first *produce*. A man cannot really give what he has not produced. If he has inherited the property he uses for the benefit of the poor, he is only a *medium*, not a giver. The one who produced the property, is the actual giver in the case. The full meaning of the passage is this: *It is more blessed to give your talents free play in production, than it is to consume*. This was plainly the idea of Paul, as will be seen by reading the context. The text occurs in his charge to the elders of the church of Ephesus; and in this part of his discourse he is speaking particularly about production and consumption. He says, "I have coveted no man's silver, or gold, or apparel: yea, ye yourselves know, that these hands have ministered to my necessities, and to them that were with me. I have showed you all things, how that so laboring ye ought to support the weak, and to re-

member the words of the Lord Jesus, how he said, *It is more blessed to give than to receive*." Acts 20: 33-35. Here Paul first tells the Ephesians how he has himself labored and produced, and then exhorts them to follow his example, and *labor* in supporting the weak, which is the kind of giving that he speaks of as blessed.

The first and sufficient reason of the blessedness of production is, that it pleases God, and places us in an attitude that attracts his life and spirit. An inferior reason is, that it increases wealth and contributes to consumption. This inferior inducement is almost the only one recognized by the world. Men work simply with a view to eat and enjoy. While this is the case the main consideration is lost sight of, and labor, in itself, must necessarily be left unattractive.

Christ said, "It is my meat to do the will of him that sent me, and to finish his work." These words are literally true. Doing the will of God attracts his spirit and life, which nourishes more effectually than mere animal or vegetable food. In a word, the difference between consumption and production is, that in one case we eat material substances, and in the other we imbibe God himself. There is then good reason why production is more blessed than consumption.

The doctrine that "it is more blessed to give than to receive," reveals the full meaning of the passage we have talked about so much: "Seek first the kingdom of God and his righteousness, and all other things shall be added unto you." The righteousness of the kingdom of God, is the righteousness of being productive—of doing the will of God in all things.

This doctrine also teaches us how to *pray*. It gives a general idea of what is according to the will of God in prayer. James says, "Ye ask, and receive not, because ye ask amiss, that ye may consume it upon your lusts;" (chapter. 4: 3.) which is as much as to say: "Ye ask for *consumption*, when ye ought to ask for *grace to produce*." The prayer for consumption may be proper in a secondary manner, but God will not answer our prayers, unless the leading desire of our hearts is to glorify him in production.

In balancing production and consumption against each other, so as to make labor attractive, two difficulties are to be encountered—*aversion to production*, and *fondness for consumption*. There are multitudes to consume, and but few to produce; and this makes poverty. To meet both these difficulties, we must limit propagation, and so not have so many to con-

sume; and increase the fondness for production—then we have a balance that will take care of itself. Propagation is indirectly, but really, consumption of the most powerful kind. We must go for the *quality* of human beings, in preference to *quantity*. On this principle, persons who have *no* children in quantity, may still have children in quality, if they help improve the quality of others. Those who improve the quality of things which exist, are as really producers as those who increase the quantity. Christ, while on earth, did not increase the quantity of human beings at all, but he greatly improved the quality. The view of the world is, that this whole subject of production, as applied to human beings, must be left entirely to chance and blind passion—that sober wisdom must have no control of it. They do not think of improvement, any more than farmers once thought of draining and improving their land.

Assuming that Christ did propound the true principles of political economy, and that he has revealed them to us, we should exercise ourselves in them, without reference to feelings. We should believe the truth, and constantly confess it: look at the eternal truth of things as they are in Christ, and not as they are in our feelings. To illustrate: Here is a job of work to be done. Feelings tell us that it is hard and difficult to do it. But this is only a false imagination produced by the deep-seated and universal idea, that production is laborious and irksome. The truth as it is in Christ, is, that "it is more blessed to give than to receive;" i. e., it is more blessed to produce, according to the will of God, than it is to eat and drink. This is the eternal truth, sealed with the testimony of Jesus Christ; and it is the duty of all who believe on him, to take their stand upon it, and continually assert the truth, denying their feelings if necessary, until they fully realize that productive labor in God's vineyard, is more delightful and satisfactory than eating and drinking, or consumption in any form.

There is no prospect at present of there being too many volunteer producers; but supposing the revolution involved in these principles to have been effected, and that enthusiasm for production were to take the place of desire for consumption, what would be the proper limit of production? The solution of this question will be found in the application to human life of the familiar principle, that it is bad economy to spoil tools, or to use dull ones. The first consideration in the execution of any business, should be to keep the *men* and *women* in good order, and not let them get *dull*. It is the worst possible economy, to spoil men in labor. They should not labor beyond what is proportioned to the improvement of their nature, for the sake of fruitfulness in production, on the same principle that a carpenter should not put a sharp chisel into a timber covered with gravel, and thus injure and dull it. A mechanic who takes good care

of his tools and will not work with dull ones, will do more business than the man who is reckless with his tools. So the man who takes good care of his life, will, in the long run, accomplish more than he who smashes it, like an ax, into anything and everything; which is the way human life is generally used in the laboring world. Herein lies the great foolishness in the economy of slavery. Slaveholders have to work continually with very dull tools; and as a natural accompaniment, we find that the instrument of human life is completely used up in a few years, on slave plantations. When we ascertain exactly what is required in regard to the amount of labor, we shall see that its limitation in the way we have spoken of tends to the increase of production both in quality and quantity.

THE ONEIDAS.

BY S. H. R.

II.

WARS OF THE KONOSCHIONI.

"What gallant war-hounds rouse them from their lair,
And gnash their fangs, loud yelling for the prey!
All join the chase, but few the triumph share;
The grave shall bear the chiefest prize away,
And havoc scarce for joy can number their array."

THE Konoschioni or Iroquois were engaged in fierce warfare with the Hurons, Wyandots and Adirondacks of Canada when the French took possession of that country in 1607. During the same year, Capt. John Smith met a band of these enterprising nations in their war-canoes on the Chesapeake. Champlain, governor of Canada, having gained the friendship of the Adirondacks—a branch of the Algonquins—and supplied them with muskets, passed with his new allies, through the lake that now bears his name, into Lake George, to humble the "people of the league." Meeting a Mohawk war-party on the shores of Lake George, he gained an easy victory. (The battle was fought during the summer of 1609.) This was the first time firearms were used against the Iroquois. Astounded for the moment by the flash, report and terrible execution of the musket, but not subdued, the Mohawks sullenly retired to their forest-home to call their confederates to arms and prepare for a fitting revenge upon those new and awful assailants who were armed with thunder and lightning. But cheap as the victory may have been, it would have been well for the French had it never been gained, as it created feelings of unconquerable dislike for them in the hearts of the Iroquois, which in the end proved fatal to the brilliant schemes of French colonial aggrandizement in America.

The Dutch met the Iroquois as early as 1615 on the banks of the Hudson, and formed an alliance or "covenant chain" with them, which remained unbroken till the English took possession of New York in 1664. At Fort Orange, where Albany now is, the Dutch opened a very lucrative trade with the Indians, exchanging European commodities, especially firearms, for furs. The English saw the importance of gaining the friendship of the Iroquois. A treaty was soon formed with them, and renewed from year to year, down to the breaking out of the American Revolution, "to keep the covenant chain bright." A regular Indian agency was

established to look after the interests of the fur companies and the wants of the Indians. This agency was in the Schuyler family for over fifty years, and then passed to the Johnsons. In those early colonial days it was a very important trust, requiring a great deal of subtle diplomacy, as the French were constantly acting upon the Iroquois by bribes, threats, missionary labors, and invading armies.

Having obtained the terrible "fire weapon," in the use of which they soon became experts, the Konoschioni first crushed the Adirondacks, their hereditary foemen, and then turned upon other nations with greatly augmented zeal and warlike efficiency. Their efforts were directed with especial fury against their kindred nations—the Hurons, Wyandots, Neuter Nation, and Eries—most of whom had espoused the cause of the French. In 1643 the Konoschioni destroyed the Cats or famous Neuter Nation, or drove them from the Niagara peninsula. From 1648 to 1654 they waged a terrible war upon the Hurons, Wyandots and Ottawas of Canada, in which they greatly reduced those tribes, burned the French missions, and did much damage to the colony generally. They then made peace with the French for a season, but immediately (1655) turned upon the Eries, along the southern shore of Lake Erie, haughtily offering them the alternative of admission into the League of the Konoschioni, or extermination. The Eries chose war, and after a desperate struggle of four or five years' duration were finally destroyed or driven from their ancient homes forever.

Persistent efforts on the part of the Jesuits to christianize the Iroquois soon roused them to renew hostilities against the French. In 1662 they were such a scourge to Canada that the French were almost wholly confined to the island of Montreal and seriously contemplated abandoning the country altogether, as untenable against their restless, crafty foe. But reinforcements from France enabled them to assume the offensive and carry the war into the Iroquois country. A suspension of hostilities was finally agreed upon; yet soon again

"The hollow peace-tree fell beneath their tomahawk."

The prosperity of the French depended upon the fur-trade carried on with the tribes along the shores of the great lakes and in the valley of the Mississippi. But the Iroquois held under their sway a large territory along the St. Lawrence and north of Lake Ontario, between the French settlements and their distant trading-posts and missions, which enabled them to command the navigation of the St. Lawrence and the lakes. Even in times of peace they often plundered the French fur-companies, and led offending traders to the stake. This forced trade to open a new channel by way of the Ottawa river, and thence overland to the Sault St. Marie. Even by this route the French were not sure to escape the Iroquois, for their war-parties ranged the entire length of the great lakes, and in 1680 La Salle found them pursuing their career of conquest in the valley of the Mississippi. As diplomacy failed to win the Iroquois to the French interest, and as they constantly intercepted French expansion, it was resolved to conquer them at any cost, so soon as a pretext could be found; and many such were at hand.

All this time the English were in close alli-

ance with the Konoschioni, whom they supplied with arms and secretly or openly incited against the French, even when themselves at peace with France. Governor Dongan, of New York, secretly roused the Iroquois to invade Canada again in 1683. The French retaliated the year following, but without advantage. Hostilities continued, and in 1687 De Nonville, then governor of Canada, planned and executed a grand invasion of the Iroquois country with 2000 French troops and 600 Indians. He destroyed the towns and crops of the Senecas, after defeating them in battle, and then took possession of their territory in the name of France. In retaliation, several Iroquois war-parties ravaged the French settlements the same year. But this was but a foretaste of their revenge; for during the year following 1200 of the Konoschioni rushed with great fury upon Montreal, burning every building on the island except the forts, and killing and taking captive a thousand of the French. Their movements had been so swift and secret that the colonists were wholly taken by surprise. Two hundred prisoners were carried away for torture or adoption. The French destroyed their forts at Niagaria and Frontinac, and withdrew distant outposts, leaving the Iroquois in temporary possession of all the country west of Montreal.

Count Frontenac, being made governor for the second time, restored the fortunes of the French, and during the winter of 1692 sent 600 French and Indians on snow-shoes into the Mohawk country. After suffering great hardships this expedition reached their destination, destroyed three Mohawk towns, and carried away 300 prisoners. In 1696 Count Frontenac in person conducted an expedition of 1000 French and a large body of Indians into the Iroquois country, with the avowed purpose of subduing the Onondagas and Oneidas and moving them into Canada where they could be kept under control. His army embarked in boats and canoes, as had most of the former expeditions, and passed up the St. Lawrence and coasted along Ontario to the Oswego river. They then landed and marched upon the Onondaga settlements. The Indians abandoned their towns and took to the forests. The invaders burned their castles and villages, and destroyed large quantities of corn found in *cache* or growing in the fields.

From Onondaga a division was then sent under the command of De Vaudreuil to destroy the corn and villages of the Oneidas, and take the nation captive. On reaching the principal Oneida town, De Vaudreuil and his French and Indian followers found it fortified with ditch and rampart, and stocked, like all the other Iroquois castles previously destroyed; but, as at Onondaga, the nation had retreated into the fastnesses of the primitive forests, leaving some thirty of their sachems, chiefs and old men to make conditions with the invaders. De Vaudreuil would listen to no propositions of peace, but ruthlessly destroyed all their corn and applied the torch to their castle and villages, telling the thirty captives they must go to Canada, where all their nation should be moved and well provided for by the French.

These expeditions produced much suffering, and possibly inclined the Konoschioni to peace.

At any rate a treaty was concluded two years later between the French and the Five Nations, which lasted from 1698 till 1755. Both parties had suffered many disasters without compensating advantages, and felt that they were too equally matched to make it advisable to longer contend. The wars had been bloody and relentless on both sides. During this long peace with the French the Konoschioni pursued their conquests southward clear into the Carolinas and Georgia, against the Catawbias and the Cherokees. After the Tuscaroras, whom they recognized as kinsmen, had been driven from North Carolina, in 1713, the Five Nations received them into the League as the sixth nation, and the Oneidas gave them lands.

In the fourth inter-colonial strife, commonly called the old French and Indian war, the Iroquois were again induced to take up the hatchet against the French, and from 1755 till Canada was yielded to the English in 1760 the old scenes of blood were reenacted with new horrors. During this war William Johnson led the Iroquois to complete victory over the French in the battle of Lake George, thus giving them full revenge for their first defeat upon the shores of that lake a century and a half before. They afterwards gained a second great victory in Canada, hastening the conquest of that country. For the victory of Lake George, Johnson was knighted and made a baronet: for the blood freely shed in the quarrel of their selfish ally the Iroquois gained renown, but no tangible reward.

Thus it is seen that the Konoschioni were engaged in almost incessant conflicts for about a century and a half. They reached their highest point of prosperity near 1700, and then began to decline. They had established a great Indian empire, extending from New England to the Mississippi, and from Canada to the Tennessee, holding most of the tribes in that area as tributary nations, over whom they kept a watchful supervision, dictating their conduct in peace and war. In the achievement of these conquests, here barely enumerated, the Oneidas took active part. They gave especial offense to the French, who reported in 1665, that this nation, with an insignificant number of warriors, despised the power of the French arms, and when the other nations were disposed to listen to terms of peace the Oneidas prevented an adjustment of affairs by their subtle harangues and preponderating influence in the councils of the League.

By a chain of marked providential circumstances the Konoschioni became a living rampart between the English and the French in America. Governor Dongan saw and declared this to be the fact, and the French were painfully aware of it. Had they become the friends of the French and foes of the English, how different would have been the record of American history! As it was, they conquered their enemies and reached a position where, if left to themselves, there is strong reason to suppose that they would soon have risen out of the hunter-state and advanced to civilization. But this was not to be: Providence had decreed that they should give place to a more progressive race. Their long-continued wars fearfully reduced their numbers, notwithstanding their extensive practice of adopting prisoners. Of this

fact they were mournfully conscious. But their friends were more fatal to them than were their foes, teaching them as they did the excessive use of the pernicious "fire water." In 1650 it was supposed that the Konoschioni numbered at least 25,000, while some writers give a much higher figure. With the Tuscaroras included, their entire population was estimated at about 17,000 at the commencement of the American Revolution.

BOOKS FOR REVIEW.—A complaint has been made of new books being exposed for sale, uncut, at about half price. These are in most cases sent for review. The number of books thus supplied to the second-hand booksellers, who do not always trade according to their appellation, would surprise the uninitiated. The sale of the books sent to a well-known literary periodical brings in more than £1000 a year. Those sent to the *Times* must be more valuable still, and this on the doubtful chances of getting the book reviewed—the chances being perhaps 999 to 1 against a review. But then if the *Times* does review a book it is sure to sell. As an instance of the value of a review in this leading journal, an authoress agreed to receive so much for the copyright of her last novel, and £100 more if it was reviewed in the *Times*. It was reviewed in that journal, and the extra £100 was cheerfully paid.—*Court Journal*.

GOD NOT A "JUSTICE OF THE PEACE"

DEAR CIRCULAR:—I was very much impressed by the first article in your thirty-fifth No., entitled "Generosity before Justice." What a cold and contracted ideal people must have of a perfect world, when they conceive of it as under the reign of mere justice! Justice is a power that is adapted to the work of regulating the relations of *separate individuals*. Its appropriate business is to step between persons or parties, and cut and trim their liberties and their relations to each other, so that they may not clash. These persons or parties may be at heart the bitterest enemies for aught that justice can say or do.

Far different from this state of things was Christ's plan. His prayer was that his followers might be one, even as he and the Father were one, or as a single member of the body is one with all the other members. Conceive, if you can, of the hands having a falling out with each other and appealing to some third party to settle their conflicting interests and establish justice between them. The truth is, the body gives to the hand all that it is capable of giving, and all that the hand is capable of receiving, and makes as perfect and happy a hand of it as circumstances will possibly admit; while on the other side, the hand yields to the body the utmost service that it is capable of yielding. Here is a case where generosity and not justice reigns, and here is an illustration of the government of the Kingdom of Heaven.

One of the evil fruits of the false notion that would make God's government a mere administration of justice, is, that it fosters a great deal of evil-thinking. Those who are under the pressure of untoward circumstances, are continually tempted to say, "How can a just God suffer this state of things to exist?" They are in a constant grumble because justice is not done. They are not generally bold enough to openly accuse God of wrong-doing, but under the cant phrase, "inscrutable providences," they hide a great deal of evil-thinking. They are much in the condition of the slaves described in "Uncle Tom's Cabin," who did not venture openly to censure their superiors whose ways they did not like, but, in order to soften the matter, called such persons "curus." I imagine that in the mind of a large part of mankind, God is a "curus" being, simply because he don't carry out their ideas of justice. They ought to know that the universe is not built upon the idea of mere justice. God's plan is to make *one* of all that are capable of such unity, and in order to bring it to pass, he has put these candidates for unity into a school that is adapted to the work of training them for that condition. Now a good scholar who

is ambitious for an education, is not in a continual grumble at the rules of the school he is in, because justice is not done him. He expects to study hard, and to be put under a special pressure, and to have his liberty interfered with in many respects, in order to bring about special results. It is a part of the compact that necessarily pertains to his condition as a scholar.

It appears to me that if these evil thinkers would get rid of the narrow conception of God that would regard him as merely a "Justice of the Peace" who does not appear to understand his business, and learn to think of him as a kind Father who is training them for the highest possible destiny, they would have a much more truthful idea of the universe, as well as a happier place in it. H. J. S.

THE CIRCULAR.

O. C., MONDAY, DECEMBER 13, 1869.

RICHARDSON AND JOHN BROWN.

DEAR CIRCULAR:—While waiting for a true verdict on the Richardson-McFarland tragedy, I will call your attention to one or two of the obvious points in the case.

First, there is in the public conscience a strong feeling that marriage law, so long as it is law, should be sustained. This works in favor of McFarland, who, though wrong and violent in his method, will still be deemed the vindicator of marriage sanctity. 2. Opposed to this conservatism is the growing sentiment of humanity which is equally strong in favor of protecting women against the oppression and abuse of men, whether exercised under the cover of marriage or otherwise. This raises a spontaneous sympathy for Richardson, who appears as the chivalrous friend of a defenceless woman. Here are divided currents of feeling drawing different ways and puzzling the consciences of men. It is no wonder in the mental confusion thus produced, that Beecher on the one hand rushes into a position that tacitly insults all marriage claims, or that Dana on the other hand accents danger to the institution and shouts warnings against those who under any incitement interfere with established domestic ties.

It appears to me that the situation with respect to marriage at the present time is much like that which attended the slavery controversy ten years ago. Then, as now, there was a divided appeal; one party clamoring for the sanctity of law, with its slave-hunting provisos, and another party standing on the sense of justice and humanity, which said that the black man was wrongfully held, and ought to be free. The struggle was so fierce between these colliding elements that conscientious men hardly knew what course was right. John Brown stepped in and attempted in a private way to carry the point against law, and lost his life. People pitied him, and sainted him, but of the manner of his death there was nothing to say. Law and slavery were in the right; that is, they had the power, and while he took the risk, they exacted the penalty.

So in general is it now. Richardson however differs from John Brown in this: that whereas Brown attempted to give the slaves freedom, Richardson, in a less disinterested spirit, tried only to run a persecuted wife from one master to another. He proposed to step into McFarland's shoes. This detracts somewhat from the sympathy that would otherwise be accorded to him, and it was this undoubtedly that aimed the assassin's pistol at his life.

The O. C. of course can take neither side in the controversy as it stands. The issue we make with marriage is quite different from that involved in this affair, or that raised by many of the so-called reformers. But it cannot fail to be observed that this domestic tragedy, acted upon so public a theatre and interesting so many people, is one of the fore-ordained steps leading to the inquest on social institutions. "The trial of marriage is next in order," said J. H. Noyes at the close of the slave-holder's war, and events give almost daily confirmation of the prophecy. G.

PERE HYACINTHE.

Father Hyacinthe, appealed to for the relief of the French poor in New York city, consented to break his silence, and gave a lecture in the Academy of Music last Thursday evening. He was received by a crowded audience and a perfect storm of applause. His subject was Charity, or the power of the heart. He says:

The heart is at the root of every act and the foundation of all. Let us then be men of heart. Let us bear our hearts into civil life, into social life, into domestic life. Let us be men of heart in city and in State. Let us love country, family, loyalty, probity. Let us love the Church of Christ, but not as the church of any particular sect. Let us respect the letter, but not as an extinguisher—the letter kills, the spirit gives life. Let us then, I repeat, start as men of heart.

We quote the concluding paragraph from a report of his lecture as an interesting specimen of his oratory, and manifestation of his spirit.

In modern society celibacy exists for the sake of God; but this exception, if you make it a rule, is against God and against nature. Celibacy is cowardice if it does not glorify marriage. The apostles have said marriage is honorable, marriage is spotless before God and men. The great object in view is the reconciliation of heaven and earth and of the present life with the future, and to secure union on earth. Union in the city, in the nation, and in humanity was the thought of Jesus Christ, who first proclaimed that which the prophets but dimly saw and the Jews never did see. The centuries that will realize this great union of nations, have begun. The labor has commenced. Steam and electricity remove all obstacles. Agassiz says the American Continent was the first created; it will be the last in the fulfillment of the designs of the Creator. A cosmopolitan land—cosmopolitan in the intentions of its founders, in the bloody struggle of its defenders—God has in store for you who peopled it the accomplishment of admirable results. Northward are the Esquimaux; southward is Africa. You summon from walled China the unmoving people to dwell amid the moving nation, the stationary to mingle with the progressive; all impelled by the breath of you, the great humanitarian people. The foundation of your people is the Bible, the book that speaks of God the living word of Jesus Christ. In an admirable manifesto from your President, there shines through his words the Christian faith. A belief in Jesus is at the root of this nation. May Jesus Christ protect your country and develop old Europe, preparing amid strife, unity, and religious and material prosperity. And when I return, I shall tell Europe that I have found here liberty associated with Christianity, and have been among a people who do not think that to be free they must be parted from God.

COMMUNITY JOURNAL.

ONEIDA.

Dec. 3d.—In the meeting last evening Mr. J. raised the query whether the bell could not be located in some more eligible position. The new wing obstructs the sound so that he had not heard the bell lately. After various propositions, involving considerable discussion, it was decided to try a steam-whistle.

—The new wing has been furnished with 1000 feet of gas-pipes. The entire brick mansion now has gas-pipes ready laid, and we only wait for the most approved gas-generator for private establishments, to enjoy the blessing and luxury of gas-light.

—It will perhaps give some idea of the intellectual atmosphere that we live in here, if we quote briefly from a nocturnal recitation that one of the sister students in philosophy was heard by her roommate to indulge in; "It is perfectly transparent," she enunciated in a clear, distinct voice,—"as smooth as ice and as black as jet!" and then very emphatically—"Why, it is owing to the sensibility of the fluid and the elasticity of the liquid." Did any one, even in waking hours, ever utter convictions more profound than these?

Dec. 5th.—Commenced Upham's "Salem Witchcraft" for the 7 o'clock evening reading.

—They had at W. C., last winter, barely four days of sleighing, while here we enjoyed a succession of more than one hundred days of fine sleighing. The balance promises to be in their favor this winter, since they already have snow a foot deep, while with us, the earth but partially hides her nakedness.

—The "Midland" opens with flattering prospects for its stockholders. One of the directors reports that the business already exceeds the most sanguine anticipations of the Company, and is more than paying expenses. One of our agents, whose business in Canada recently took him over a portion of the "Grand Trunk" Railroad, says, that according to his observation the Midland carries more passengers now than the Grand Trunk. It is becoming such a useful institution to us, that it is already supplying much of the service for which we have depended upon horses, and we see an immediate prospect of doing our business without keeping, as at present, nearly a score and a half of horses, that devour so much of our substance. The trains of this road connect so well with the trains of the N. Y. Central that persons or parties going to New-York, Wallingford, &c., have nothing to do but to run out of the door and step aboard the train, to be off to their destination in warm, comfortable cars. Our business at Oneida village, which has required two or three daily trips of the O. C. express, often making a toilsome ride of an hour or more, through storm and mud, can now much of it be transacted by the aid of steam; and we are only a five minutes' ride from the village that we have had to reach for more than twenty years by a four-miles' circuit. We shall of course derive more and more advantage from this road as it is extended towards New York, and the number of trains increases. While we expect so much from it, we hope in return to contribute a good deal towards making it pay handsome dividends to the stockholders.

The Critic in the Kitchen.—It is said that nothing is finished until it is reported. So it has occurred to me that I would finish the recently administered criticism of certain delinquent kitchen implements, by reporting its results, and also give a gentle hint to certain other articles that evidently need it.

It will be recollected that the wheel-borrow was reported to be in a somewhat crazy and decrepit condition, in consequence of its career of dissipation. Well, the other morning it was borne back to its accustomed place in an insensible condition. The poor wheel-borrow could not be borrowed any more; for the borrow part of it was utterly ruined, and nothing but the wheel was left. It afterwards occurred to me in reasoning upon the case, that the moral condition of wheel-borrows was a borrowed condition, and that I could keep one as well as not on condition that I borrowed it. So I went to the gardener and borrowed one, and truth to tell, it stays in its new quarters with the utmost sobriety; and I have congratulated myself not a little upon making this discovery in the metaphysics of wheel-borrows.

The coal-basket, shavings-basket, hammer, fish-tub and ash-pan, have behaved themselves with the most commendable punctuality since their criticism; but the lantern gives evidence of having a thoroughly wick-ed heart. About a fortnight ago it eloped with one of the kitchen lamps. We had two lamps and a lantern left, with which we got along with some difficulty, until C. broke one of his bakery lamps. Then it became necessary to get a new one. But three or four days ago that new lamp disappeared. Astronomers compute that at the present rate of the disappearance of luminaries, it will take but a few weeks to bring about a condition of total darkness in the kitchen; and they would recommend a season of fasting and prayer, especially to those who are in any respect conscious of sympathy with the spirit that has produced the disturbance, with the hope that they may thus avert the threatened calamity.

Another misfortune that has afflicted us, is the disappearance of the monkey-wrench from the nail where it hung over the large steam-kettle. The most charitable hypothesis that I can construct concerning its whereabouts, is, that there is a "screw loose" in somebody's character, and that the wrench has gone off to tighten it up. My hope is, that if it ever gets hold of that loose bolt, it will turn and turn and return, until it secures for that person a returning spirit. KITCHEN MAN.

Testimony.—"Know ye not, that to whom ye yield yourselves servants to obey, his servants ye are to whom ye obey; whether of sin unto death or of obedience unto righteousness?" There are two great forces constantly acting upon us, and we have the ability, and God has placed the responsibility upon us, of yielding ourselves to those forces or powers, either of "sin unto death, or of obedience unto righteousness." James speaks with emphasis: "Let no man say when he is tempted, I am tempted of God: for God cannot be tempted with evil, neither tempteth he any man: but every man is tempted when he is drawn away of his own lust and enticed." We are called to be soldiers; soldiers on the battlefield. Shall we yield to the enemy of all righteousness, or shall we yield ourselves to God as those that are alive from the dead, and our members as instruments of righteousness unto God? E. L. H.

WILLOW-PLACE.

Dec. 8th.—A peddler of spectacles called this afternoon and was exceedingly anxious to supply us all, young and old, with spectacles of some kind; but our wants in this respect were already abundantly supplied, and so no purchases were made. Messrs. O. and H., questioned the young peddler some as to his place of residence, where he bought his goods, &c. "What is your native country," asked one? "Russia," said he. "Oh, is that so? well, we have a Russian working in our trap-shop," was the reply. At this the man eagerly jumped up, exclaiming, "Have you, and may I look at him?" "Oh, yes," said Mr. O., "I will take you to see him;" and off they started for the trap-shop. When the young man came back, he said the man at the shop was part Polish and talked a mixed dialect of Russian and Polish. "But I can understand him," said he, "for I can talk Polish too." He then began to speak admiringly of the way the man in the office (Mr. P.) talked German. "Why," said he, "I thought surely he was a German, and asked him in what part of Germany he was born? He speaks the language just as well as any German I ever heard."

WALLINGFORD.

—A lecture at 7 o'clock by Mr. Pitt—subject "Greece."

Dec. 4th.—This morning at about 6 o'clock we were awakened by the alarm of fire, and upon going to the window saw that the Baptist church over in town was in flames. Some of our men went over. The church was past saving, and before they arrived on the spot we at home saw the spire fall. The fire communicated from Mr. Beech's barn, where it originated. There was no wind, fortunately, else the Beech house would have shared the same fate. The firemen bent all their energies to saving that, throwing water very freely. The house was protected on the north side by carpets. The fire is supposed to have been the work of an incendiary.

—*Evening Meeting.*—G. W. N.—The New Testament has one train of characteristic facts running down through it—brilliant spots, you might say, which stand out like stars in its history—that we shall do well to look at for a moment. I refer to the visitations of angels. See how many instances of that kind occur in New Testament history. Christ, for example, in the two great crises of his life—his birth, and his temptation in the wilderness—was visited by angels; angels appeared to him again at the transfiguration, and also at the resurrection and ascension. When Peter was thrown into prison an angel came and loosed him, and something equivalent appeared to Paul and Silas when in prison. Then Paul, in the great crisis of his life, was visited by an angel who revealed to him what he was to do. Again, in his great catastrophe on shipboard, an angel stood by him in the night and told him he should get through safely! Finally, in Revelation, an angel stood by John. Probably that was the great crisis of the church in which they needed, if ever, angelic ministration. These are brilliant spots. They are slurred over now, and are considered to belong to a past age; but it seems to me if we fully enter into the spirit of the New Testament, and of those who represent it, we get into the same sphere where these transac-

tions are natural. We have not passed by that age of angelic ministration, but must be on the watch for it and expect it.

"WASH, WASH, WASH AWAY."

WHEN the women of the Community first came together they soon found that an immense weekly washing was certain to be a part of the new order of things. Their combined experience and means did not offer any easier mode of washing than had prevailed in the little farm- and village-kitchens they had severally left. But they were hopeful, and the men were helpful, and lent a hand. This was introducing enthusiasm as well as stronger human-machines into the business.

When the writer came to the O. C. in 1853, the washing apparatus and fixtures consisted of one rain-water cistern; one pump for hard water; one iron boiler; two long wooden boxes at which sixteen men and women could work; one hand washing-machine for stockings and flannels; one clothes-yard and lines; numerous tubs and pails and wash-boards; one table, one stove and irons for ironing, and one pounder for heavy bed-clothes. Once a week twelve men and twelve women were detailed to get up at four o'clock in the morning, and rub dirty clothes until breakfast at six. These generally succeeded in doing the most of the hand-rubbing. After breakfast a smaller detail of men and women was made to help the regular washer-man and women, do up the boiling, rinsing, wringing, starching, hanging out, and putting to rights. The ironing and sorting of clothes was done by a regular detail of women who were busy the rest of the week. Every item of clothes had to have a general and special soaping and rubbing. Those that went through the washing-machine were not exempted from hand-rubbing. Rinsing and wringing were done by hand, piece by piece. Every pail of water had to be pumped or dipped, and carried less or greater distances. These tiresome ways lasted for ten years more. But they did not prevent our mechanics as they bent over and rubbed, from discussing the idea of introducing machinery and all manner of labor-saving things to do the work. Meantime some trials of chemicals were made to loosen the dirt. Various kinds of washing-machines were tried and found inadequate, for they were all invented for the private family. This led us to visit hotels, asylums, the Shakers, and any one who had large ideas and expeditious modes. After a while a large wooden centrifugal clothes-wringer was introduced. It was run by hand sometimes, and sometimes by horse-power. It was always dangerous, and gave place to the "Universal Clothes-Wringer."

In 1863 the Community having become easier in its finances, and the mechanics all very confident in what they could do, and every one tired of going on in the old way, it was decided to build a wash-house and laundry, "with all the modern improvements." The "Tontine," a brick building seventy-two feet long, thirty-six feet wide and three stories high, was accordingly put up, and one-half of it devoted to the washing-department. A steam-engine and boiler were introduced; "Shaker" and "Non-pareil" washing-machines; pipes for hot and cold water; an iron centrifugal wringer; a complete system of drainage; an ironing-room and mangle, and a dry-room with fixtures for bad weather. This was a great victory over dirt, and relieved us all. It continued in operation until last May, when the requirements of silk-manufacture, made it necessary to move the washing to the "Mill." A one-story brick building seventy-five feet long and thirty feet in width, with a small boiler-house attached, had been fitted up previous to the removal. A small room in the Mill adjoining was also fitted up for receiving and sorting the dirty clothes. The building had been successively used as a forging-shop, wood-shop, and fruit-preservatory, and consequently had no particular fixtures for the new business. Everything had to be done as if for the first time. No more novelties in the way of machinery have been introduced. The improvement on the old wash-house, is mostly in the general arrangement and working of

the parts. The business is all on one floor, and the clothes after being received in bags at the sorting-room at one end of the establishment, pass straight on to the washing-machines, rinsing-boxes, wringing-machines, steam-dry-room or clothes-yard, (according to the weather) and to the ironing-room at the other end of the building, where they are packed in chests and taken to the house to be sorted and distributed to the shelves of their respective owners. Steam and hot water are supplied from a boiler, in the works. The machinery is driven by a water-wheel in the Mill.

The expense of fitting up the new establishment was as follows:

Wash-house,	\$2,886
Engine and Boiler,	550
Rain-water Cistern and Pipes,	390
Tanks, aqueduct, &c. for spring-water,	142
Shaker Washing-Machine,	250
Nonpareil " "	120
Small " "	80
Shafting, pulleys and belting,	601
Hot and cold water pipes,	620
Wringer,	250
Dry-Room,	150
Rinsing-boxes,	50
Mangle,	160
Tables, flat-irons, &c.,	75
Floors and drains,	150
Lath and Plastering,	78
Pumps,	40

Total, \$6,092

The work done last week was as follows:

Sheets,	202
Handkerchiefs,	504
Towels,	1,113
Pillow-cases,	316
Bed-spreads,	15
" quilts,	3
Collars,	262
Table-cloths,	80
Women's dresses,	19
" waists and skirts,	127
" drawers,	105
Chemises,	143
Night-dresses,	81
Men's shirts,	227
" woolen under clothing,	79
" outer garments	48
Children's clothes,	157
Stockings, No. of prs.	249
Aprons,	223
Cloth bleached, No of yds.	130
Miscellaneous,	174

Total, 4,257

The expense of doing the above was as follows:

1 man 6 days,	\$9.00
1 " 4 " "	6.00
6 women 5 days,	30.25
Female sup't 5 days,	7.50
Male " and engineer 6 days	15.00
Fuel, soap, starch, &c.,	24.10
Interest, and Use of Water-power,	12.00

Total expense for one week, \$103.85

The machinery and fixtures are calculated to do our weekly washing in two days. They are capable of doing three times as much as we require of them. The week taken for this exhibit is somewhat below the average. Many of these items should be nearly doubled for the summer-months when women's dresses alone oftentimes reach ninety per week.

The number of people for whom washing is done, is two hundred and thirty-seven. The number of pieces washed for each person is eighteen. The actual weekly cash expense is twenty-nine cents a head. This looks very economical, when we consider the unusual number of pieces washed for each individual, and that many of them are heavy household articles, not usually owned by people who board out and get their washing done by the piece.

One of the first effects of Community life, was an increased attention to personal cleanliness, especially

in the matter of under-clothing. We probably change our under garments twice as often as is done in the circles where we formerly moved. Eleven hundred towels a week for only two hundred and thirty-seven persons, is certainly a very liberal allowance. And it does not include table-napkins yet. White linen handkerchiefs, we are glad to say, have, with one or two exceptions, entirely superseded the old greasy silk-handkerchief which used to be carried in the hat, and sometimes in the breeches pocket for a napkin.

THE ONONDAGAS AND THE "STONE GIANT."

DEAR CIRCULAR:—I offer you herewith a fragment from Clark's "History of Onondaga," a book published at Syracuse several years ago, which tends to confirm the theory of antiquity which is claimed for the "Cardiff Giant." In a chapter devoted to the traditions and superstitions of the Onondaga Indians, this history says:

"Quisquis or great hog was another monster which gave the Onondagas great trouble, as did also the great bear, the horned water-serpent, the stone giants, and many other equally fabulous inventions, bordering so closely upon the marvelous that the truth would suffer wrongfully if related in full, but nevertheless are found among the wild and unseemly traditions of the race."

Most of the fabulous creatures here mentioned are exaggerations of common animals, such as would be extremely natural to the conception of a simple and ignorant people; but the idea of stone giants is so far-fetched and remote as to appear purely imaginative, unless we assume that it had for a basis some circumstance in the history of the Indians which our present information does not disclose.

There is at least a startling coincidence between this legend of the Onondagas, and the discovery of the "stone man." Cannot they be made to throw light on each other?

My conjecture is, that at some distant period in the past the Onondagas were familiar with this image. Whether it was executed by the Jesuits, the Norsemen, or by still earlier artists, it had a place and use above ground. Its proprietors were a people distinct from and superior to the Indians; and in the wars and adventures which took place between the two parties, whatever bad fortune fell to the Indians was associated by them with the "Stone Giant," as the symbol of their opponents. Afterwards (perhaps on the withdrawal, perhaps on the extinction of the stone-cutting party), the image was buried, and so all personal knowledge of it ceased among the tribe. But the story of the "Giant" and its owners was handed down from generation to generation with the added embellishments that gather about oral tradition, until it has taken its present form. Some such supposition as this connects without violence the Onondaga legend with the Cardiff discovery.

W. C., Dec. 7th, 1869.

MOMENTUM AND VIS VIVA.

By J. J. Skinner, Ph. B., Principal of O. C. School.

IV

IMPACT OF ELASTIC BODIES, CONTINUED.

IN the example of the two cast-iron balls, considered in the last article, one of them was supposed to be at rest before impact; but aside from that there was nothing peculiar about the conditions. And we found that after impact the arithmetical difference between the momenta, or, if you please, (since the balls would be moving in opposite directions), the algebraic sum of the momenta of the two balls, was just equal to the momentum of the mass M before impact. Hence we might infer in general, that whatever the elasticity or masses or velocities of the bodies, the algebraic sum of the momenta after impact would be equal to that before impact; or that if the two bodies were moving before impact in the same direction, and after impact in opposite directions, the arithmetical difference of their momenta after impact would be equal to the

sum of their momenta before impact. But we may give a general demonstration of this, which will not only prove it true, but will also show us why it should be true.

The masses of the two bodies being M and M' , their respective velocities before impact being U and U' , and after impact V and V' , the change of velocity which the mass M experiences by the impact is $(U - V)$; and the change produced in the velocity of M' is $(V' - U')$. Now whatever the relative masses or velocities, or the degree of elasticity of the bodies, or whatever heat or molecular motion may be developed in the impact, the total resultant pressure on M is at every instant through the whole time of the impact precisely equal to the opposite resultant pressure which is exerted on M' . The changes of velocity of the two bodies will therefore be to each other inversely as the masses. We thus get the proportion

$$M : M' :: (V' - U') : (U - V);$$

whence

$$M'(V' - U') = M(U - V);$$

from which we have

$$MV + M'V' = MU + M'U';$$

in which the two members represent the algebraic sums of the momenta respectively after and before impact.

This last equation is derived in Silliman's Physics, page 145, by transforming and combining the general values for V and V' after impact. And upon the evidence of this equation the assertion is founded, that by the impact of bodies, whether elastic or otherwise, no motion is lost. But the equation does not prove that, by any means. It simply proves that the algebraic sums of the momenta before and after impact are equal. And even that must be taken with a clear view of the circumstances of the case. For instance, in the example already solved, we found that the mass M would have a velocity after impact of $441\frac{1}{2}$ feet per second in the direction opposite to its previous motion. You may say, if you please, that it has a negative momentum equal to $441\frac{1}{2}$ pounds, but you must not understand that this actually destroys an equal part of the momentum of M' ; for the bodies are supposed to have no connection with each other after impact. All we can say is that if the momentum of M could be applied so as to destroy an equal part of the momentum of M' , the remaining momentum of M' would be equal to the momentum of M before impact. But this does not prove that there is no motion lost. For in our example of the cast-iron balls the bodies are partially inelastic, and in the impact there must have been more or less change from ordinary motion to heat; and we shall find further on, that the heat developed by this case of impact, if equally distributed through the two balls, whose combined weight is 193 pounds, would raise the temperature of the whole mass 11.4784 degrees Fahrenheit. Has there then been no destruction of motion? True enough, there may not have been, if you consider this heat as motion. But then, the momentum after impact entirely neglects this motion, and yet comes out algebraically equal to the momentum before impact, and arithmetically much greater still. Can it then in any way represent motion?

If, however, we make momentum what it is, there is no difficulty in seeing why it should in every case be algebraically equal before and after impact, and why in some cases it may be arithmetically much greater after than before. For it follows from the continual equality and opposition of the resultant pressures on the two bodies for the same length of time, that the changes of velocity are inversely as the masses, and thus that the algebraic addition to the momentum of the one is equal to the algebraic subtraction from the momentum of the other, and hence the algebraic sum of the momenta cannot be altered by the impact, whether the bodies are elastic or not. But if, as in the above example, the degree of elasticity and the relative velocities and masses of the bodies are such that in the second period of impact the force of restitution entirely destroys the velocity of M in its former direction and gives it a new velocity in the opposite direction, then the algebraic sum of the momenta after impact means the arith-

metical difference of those momenta; and of course the actual or arithmetical sum of the momenta after impact must therefore in such case be greater than that before impact, by just twice the actual momentum of M in its new direction.

We need not be afraid of the fact that it is possible to have an actual increase of momentum by impact. For we found that with perfectly inelastic substances, whatever change there might be from ordinary motion to heat, the momentum would be the same after impact as before. Now if a very small mass with a high velocity impinge on a very large mass at rest, when their velocity becomes common it will be very small; and then if the bodies are elastic and the force of restitution operates to separate the bodies and change molecular motion back into ordinary motion, at the instant the velocity of the small mass becomes zero the momentum of the large mass will be equal to that of the small mass before impact; then if the force of restitution has not finished its work a new velocity will be given to the small mass in the opposite direction, and the momentum of the large mass will be still further increased by exactly the momentum given to the small mass in the new direction.

It may also help us to see how actual momentum could be increased by impact, to consider the following proposition, viz: *Of two unequal masses moving with such unequal velocities that the vis viva of the one is equal to the vis viva of the other, the momentum of the one which has the less velocity is the greater.* This may easily be demonstrated generally, but it will be sufficient to consider a single example. Let the mass M have a velocity of 1,000 feet per second, and let M' be another larger mass such that when moving with a velocity of 500 feet per second its vis viva, or the work which it can perform, shall be equal to the vis viva of M . The momentum of each mass is the constant pressure which can bring it to rest in one second. But if the mass M be brought to rest by a constant pressure in one second, we know from the laws of uniformly retarded motion that it will move through 500 feet in coming to rest. And the mass M' in coming to rest in the same way would move through 250 feet. Therefore if the mass M' performs the same amount of work in passing through 250 feet, as the mass M performs in moving 500 feet, the intensity of the pressure exerted by M' , or its momentum, must be twice that of the mass M . The same may be shown by comparing the expressions for the momenta of the two bodies; for under the supposition, M' would be four times as great as M , with half its velocity.

If then, all the power of a moving body could be applied to give a larger mass a less velocity, with no loss of vis viva from the development of molecular motion, the momentum of the larger mass would very properly be greater than that of the mass from which it was derived. But from the nature of the case, in the impact of two bodies, whether elastic or not, whatever molecular motion is once developed cannot be re-converted into ordinary motion without the bodies can re-act on each other so as to be driven apart and move relatively in opposite directions. Thus the algebraic momentum cannot be increased by the impact, although in many cases, as in our example, a body at rest may acquire from a moving body a greater momentum than that of the moving body itself, and thus the actual arithmetical momentum of the two may be very much larger after than before impact.

Let us now resume the case of the two cast-iron balls, and calculate the vis viva of each after impact. The vis viva of M will be

$$\frac{1}{2} \times (-441\frac{1}{2})^2 = 97,534.722 \text{ foot-pounds.}$$

The vis viva of M' will be

$$\frac{1}{2} \times 5 \times (288\frac{1}{2})^2 = 207,840.278 \text{ foot-pounds.}$$

Now we could with just as good reason say that the actual total of the vis viva of the two balls after impact is equal to the arithmetical difference between these values, as that the actual total of the momentum is equal to the arithmetical difference of the momenta; for the work represented by the vis viva will be performed in the same direction in which the momentum would be exerted. But it so happens, by squaring the velocity of M , that whether we consider that velocity positive or negative, the

vis viva of M is algebraically positive. In treating of momentum and vis viva, then, in connection with impact, a negative sign of the velocity in the result should be regarded simply as showing the direction of motion, and should not be blindly taken as indicating destruction of motion, or anything of the kind.

Remembering, then, that after impact, the two balls move in opposite directions, we may still say that the total vis viva, or work which they can perform, is equal to the arithmetical sum of the two parts, or 305,375 foot-pounds. Now the vis viva of the mass M before impact was

$$\frac{1}{2}MV^2 = \frac{1}{2}(1,000)^2 = 500,000 \text{ foot-pounds.}$$

Hence the loss of vis viva by the impact, or the work employed in the development of heat is 194,625 foot-pounds, or considerably more than one-third of the whole vis viva of M before impact.

To determine the increase of temperature of the two balls, supposing the heat developed were uniformly distributed through their mass, we have the weight of the two masses given = 193 pounds, the mechanical work consumed = 194,625 foot-pounds, and the specific heat of iron = 0.1138. Now the expenditure of 772 foot-pounds of work in developing heat is capable of raising the temperature of one pound of water one degree Fahrenheit; hence the same work will raise the temperature of one pound of iron $\frac{1}{0.1138}$ degrees, or of 193 pounds

of iron $\frac{1}{193 \times 0.1138}$ degrees. Therefore the rise of temperature of the two balls, from the consumption of 194,625 foot-pounds of work would be

$$\frac{194,625}{772 \times 193 \times 0.1138} = 11.4784 \text{ degrees. To recapitulate, then, the accumulated energy of a mass of iron weighing 32 1-6 pounds, and containing therefore one unit of mass, moving with the velocity of 1,000 feet per second, and having therefore a momentum equal to 1,000 pounds, would be capable of imparting to a mass weighing 160 5-6 pounds such a velocity that its momentum should be 1,441 1/2 pounds, and of giving to the first mass a velocity in the opposite direction such that its momentum should be equal to 441 1/2 pounds, besides developing heat enough to raise the temperature of 193 pounds of iron through about 11 1/2 degrees Fahrenheit.$$

We need here consider but one point further with reference to impact. We found in the special example above that after impact the total *vis viva*, both arithmetical and algebraic, was less than before. And this would be found true in every case of impact unless the bodies were perfectly elastic. But if we had supposed the balls perfectly elastic, making $E=1$, we should have found after impact, $V=-666\frac{2}{3}$, $V'=833\frac{1}{3}$, and $\frac{1}{2}MV^2 + \frac{1}{2}M'V'^2 = 500,000$, which is equal to the vis viva before impact. And if, in the general equations for the values of V and V' after impact, we make $E=1$, square each of the equations, and multiply both members of the first resulting equation by $\frac{1}{2}M$, and both members of the second by $\frac{1}{2}M'$, then add these equations member to member, and reduce, we shall find this equation,

$$\frac{1}{2}MV^2 + \frac{1}{2}M'V'^2 = \frac{1}{2}MU^2 + \frac{1}{2}M'U'^2;$$

which proves that in every supposable case of direct impact of two perfectly elastic bodies the total vis viva after impact would be equal to the total vis viva before impact. There would then be no heat remaining as the result of impact.

We may now take a brief review of the claims of momentum and vis viva to be considered the *quantity of motion* of a moving body. We have seen, first, that the unit of momentum is simply a pound pressure, a unit which does not include the idea of motion; whereas the unit of vis viva is a pound pressure exerted through a distance of one foot, a unit which does include the idea of motion. Secondly, we have seen that momentum is not an effect that a moving body necessarily produces, but is only a special result under arbitrary conditions, generally impossible to fulfill; whereas the vis viva represents a definite stored up energy which must be put forth under whatever circumstances the motion of a body is destroyed. Also, if we would make a proper distinction between the *living force* of a moving body,

or the work it can perform, and the *striking force*, understanding by this the mean intensity of pressure the body would exert when brought to rest in any distance, the momentum would be merely one case of the striking force, found by dividing the vis viva, or $\frac{1}{2}MV^2$, by $\frac{1}{2}V$, or the distance the body would move if brought to rest by a constant force in one second. Thirdly, we have seen in case of impact, that however great the change may be from ordinary motion to molecular motion, momentum is never diminished, and in many cases may be actually increased; and these conditions could not obtain if momentum in any way represented ordinary motion; whereas if the bodies are in the least degree inelastic, so that there is any change from ordinary motion to molecular motion, vis viva is correspondingly diminished, as it should be if it could represent ordinary motion; and vis viva can only remain undiminished by impact when there is no permanent change from ordinary to molecular motion. Finally, we have seen that the attempt to consider momentum as a quantity of motion is unphilosophical, unnecessary and pernicious, and leads to manifold absurdities; whereas, if we would modify the terms, and speak of a moving body's *accumulated energy* for moving against resistance or producing motion in other bodies by parting with velocity of its own, it is eminently just and appropriate to use this latter expression in connection with vis viva.

THE SOCIAL PROBLEM.

HOUSEKEEPING.

The great question when a young couple are going to be married is, whether they shall keep house or board. The gentleman, as a general rule, wishes to keep house, he is tired of boarding; moreover he had anticipated so much enjoyment in a snug little house of their own, and so much pride and pleasure in seeing his pretty Nellie at the head of his table, doing the honors to the choicest of his friends.

But Nellie has quite different ideas; in the first place she knows nothing about cooking. She has, with the help of her mother, or the cook, made cake once or twice, or possibly blanc-mange, which was very much praised; but of the practical details required in the getting up of the most ordinary breakfast, dinner, or supper, she knows nothing, and has not the remotest intention or inclination to become acquainted with them.

The final result is, that they go to "board" in some highly genteel establishment, where the prices are high in proportion to the gentility and lack of real comfort, and some fine morning the young gentleman wakes up to the knowledge that he is tied to a wife who doubles his expenses, but has added nothing to his happiness, or at any rate, nothing to the real value and usefulness of his life.

This is a matrimonial swindle. Girls ought not to marry until they are ready and willing to accept the position of head of a household, and capable of making a home what it should be to husband and children.

If a man can find a woman to act as his mistress for her board and clothes, well and good—there is no law to prevent it; but for a woman bearing the honored name of wife to hold so dependent and humiliating a position, is fearful degradation.

The marriage relation is one of reciprocal interests, duties, and responsibilities; and no young lady ought to marry until she is willing to assume her share of them. True affection on the part of the husband will lighten, and make duties pleasures, but whatever aspect they bear, she must not shrink from them. If she has not received the training necessary to fit her for the position, it is her misfortune; but it will be her fault, if she does not try as far as possible to remedy the evil.

Want of means constitutes no sort of reason why young married people should not go to housekeeping. What we spend on foolish and useless gewgaws and presents would, in nine cases out of ten, if usefully applied, set them up in a style quite in accordance with their means, if not their inclination.

But it is not for themselves they fear. They are willing, or at least they think so, to live together in an attic; but society! Well, what has society got to do with it? Society will not pay your butcher's and grocer's bills, nor care a copper whether they are paid or not. Society will eat ice-cream, oysters, and cake of your providing, but that is not what you are marrying for.

You have chosen a comparatively poor man; your business is to adapt yourself to his circumstances, to make the most of his means in providing a pleasant home, and bringing up carefully and conscientiously

the children which may be given you. If society find you out, or if you find it worth while to fill up any of the chinks or interstices with occasional glimpses of the false, glittering, outside world—good! you will come back to your sweet home with so much the more relish; but do not marry it, do not sacrifice your own sense of duty, and the happiness and welfare of husband and family to it.

Talk of happiness,—there is none like that of an intelligent, affectionate family circle. There is no pleasure, no enjoyment equal to that of a mother ministering to the wants, or gratifying the natural and innocent tastes of her children. The pleasure is all the greater, because it is a *surprise*.

Young women very often dread the exacting care of a family, and expect to find wifely and maternal duties irksome and wearisome; that is the reason why they would so willingly escape them, as they fancy, by boarding, and not having children.

But unfortunately, or fortunately, God has managed it so that we cannot take the pleasures of life without bearing its pains; and cannot shirk a plain line of duty, without incurring the penalty. But we can and do, by taking upon ourselves bravely its burdens, find an exaltation of womanhood and a light and depth of happiness, such as we never before dreamed of.

Exceptions are said to exist to every general rule; but there are very few to this, that when people marry, they ought to set right about making a home of their own. If you can only afford two rooms, live in two rooms. If your means will compass a small house but not a large one, then take the small one, and be happy and thankful.

I would not give a wisp of straw for a young woman who does not want, on her marriage, to occupy her own little domain; who does not revel in anticipation over the contents of kitchen and closet, if there is only a small cook-stove in one, and a set of delf in the other. But this suggests a matter of some importance.

[We have put an odd chapter, some will think, under our heading of "Social Problem," this week. It was written it is true for society in pairs, but its principles are good for any kind of society that wants to be happy; and its spirit is admirable. It has what we should call a Jewish, Bible flavor, reminding us of Sarah of old, and of Paul's conservative order, "I will that the younger women marry, bear children, guide the house," &c. It is a chapter from Mrs. J. C. Croley's ("Jennie June's") American Cookery Book, a new edition of which has recently appeared. This is a book in which literary talent does honor to itself by ministering to the practical. The authoress, we think, is remarkable for combining contrarieties—literary ambition with domestic tastes, art and ornament with economy and practicality, and what is most strange, the position of a social reformer with the true position of a woman. She is a leading member of the Sorosis, and prominent in the Ladies' Parliament, but she does not appear to usurp any unwomanly place. She pleads for woman's right to be useful and improve herself, but does not stand for her right to vote, or to make herself odious in the common ways of the "strong-minded." She recognizes the mutual dependence of man and woman, and appreciates the harmonies of their relation.

Her "Jennie Juneiana" is a happy mixture of the satirical and tender—good-heartedness pervading every line. Her genius is constructive. Home—how to make it happy, is her idea, if we conceive it. This is entailed perhaps in her English blood. For this idea she condescended to write a cook-book; and cooking certainly has a good deal to do with making a pleasant home. So does dress; and other things more insignificant still, acquire dignity and importance as contributing in the least to the attractiveness of home. We add two more paragraphs from the cook-book as characteristic.]

If it is possible, and when there is a will there is a way, call your household together, after breakfast every morning, and have domestic worship, be it ever so short. A verse of a hymn, a passage from the Bible, and just a few words of heartfelt prayer and praise, sets everything right for the day, smooths ruffled tempers, and puts the domestic machine in nicely running order. It is also no bad preparation for the temptations and annoyances of business.

RAINY DAYS.

Make the house look as bright as possible inside, have something good for tea, put on a pretty dress, light up early, romp with the children, tell them stories, and determine at least to have sunshine in the house, if you cannot have it outside.

A CHINESE VERSION OF THE PARABLE OF THE PRODIGAL SON.—Choy Awah, a young Chinaman, is a scholar at the Five Points House of Industry. He reads the Testament in English, and then gives the sense in a dialect of his own. The following is his version of the Prodigal Son as given in an exchange:

"A man, he two sons. Son speak he to father; father got money; give some he; father he take it all right. I just now give you half. He give him half; he go long way—like me come China to New York. No be careful of money, use too much; money all gone; he very hungry. He went to man. He want work, he say; all right; he tell him to feed pigs. He give pigs beans; he eats with pigs himself. He just now talk. 'My father he rich man—too much money. What for me stay here hungry? I want go back and see my father. I say to him, I very bad. He knows I bad. Emperor (God) see I bad. No be son, me be coolie.' He go back; long way, father see him. He take him on the neck. The son say, 'I very bad. I just now no be your son; I coolie.' His father talky to boy, and say, 'Get handsome coat; give he ring; give shoes; bring fat cow—kill him; give him to eat.' They were glad. He all same dead; just now come back alive; he lost; he get back. Number one son come. He hear music; he tell servant, 'What for they make music?' He say, 'Your brother come back; your father very glad he no sick; he kill fat cow.' Number one son very angry; he no go inside; very angry. Father come out; he say, 'No, no be angry.' Number one son, he say, 'I stay by father all time; never make him angry. My father never kill one fat cow for me. My brother he very bad; he use money too much; he have fat cow and music.' Father say, 'You no understand; he just dead; he now come to life; he lost; he now come back.' They make music."

AMONG the duels which deserve to be recorded is that between the celebrated Irish barristers, John Philpot Curran and John Egan, nicknamed "Bully Egan." The latter was a man of immense size, while Curran was slim and short. The chances of being hit were, therefore, in favor of the former, for (as Curran said) it was like firing at a hay-stack. Curran therefore proposed to equalize the chances by chalking lines on Egan's body, so as to mark his (Curran's) size thereon, and by agreeing that no shot should count which took effect outside of these lines.

ITEMS.

GENERAL SALNAVE has declared himself President of Hayti for life.

THE Texas election has apparently been carried by the radicals.

SECRETARIES Belknap and Robeson have been confirmed by the Senate.

A BILL providing for female suffrage has passed both houses of the Wyoming Legislature.

THE Spanish gunboats were released on the 10th inst., in pursuance of instructions from Washington.

GENERAL SHERIDAN has been ill with cerebro-spinal meningitis, but he is expected to be about again soon.

FOURTEEN vessels of war and 40,000 troops have sailed from Spain to Cuba since the beginning of the insurrection.

A MAN in Chester county, Penn., has been fined for allowing obnoxious weeds to grow on his farm, to the damage of his neighbors.

MR. SEWARD arrived at the city of Mexico Nov. 15. He was received with banquets by the American Minister, by Juarez, etc. He was expected to leave about the 10th inst.

PRESIDENT GRANT's entire message to Congress was telegraphed to England last Monday night, and appeared in the London papers the next morning simultaneously with its publication in New York.

THE French Corps Legislatif has been discussing the coup d'état of 1851. At an extraordinary meeting of the Council of State, held on the 6th inst., all the Ministers tendered their resignations to the Emperor.

EVIDENCE of the complicity of Prussia in the Dalmatian revolt is said to be in the possession of Austria, which has asked of the European Powers consent to go through Turkish territory in order to reach Dalmatia by land.

CHINESE testimony has finally been admitted in the Police Court of San Francisco, on the ground that the State law excluding it is in conflict with the fourteenth amendment. Judge Provinces, who now admits it, has heretofore refused it.

THE Dutch propose to cut a ship canal through the Isthmus of North Holland, which will convert the city of Amsterdam into a North Sea port. The canal will be 26 feet deep and 197 wide, will cost 57,000,000 florins, and is expected to be completed in 1876.

A MAN who owes a bill in London can now pay it in four hours by simply going to Wall street and purchasing a document known as a "cable transfer," a device born of the great Atlantic telegraph enterprise, whereby the equivalent of the money which he gives in New York will be immediately delivered to his creditor in London.

AN English company is forming to complete the telegraphic communication between England and China by way of India, and extend it to Australia by means of submarine cables. The Czar of Russia has also granted a concession for the formation of a company with the right to lay a submarine telegraph cable or cables from some point on the coast of Asiatic Russia, to establish telegraphic communication with China and Japan.

THE Ecumenical Council was opened in Rome last Wednesday by Pope Pius IX. Enormous crowds filled the Vatican and lined the streets through which the Council passed. The Pope, followed by 700 bishops, proceeded to the Hall of the Council amid the ringing of bells and the thundering of cannon. The ceremonies excelled in grandeur and magnificence any that have taken place in Rome within the present century.

CONGRESS is fairly at work. The President's message seems to give pretty general satisfaction. It refers to the admission of Virginia, Mississippi, Texas and Georgia, recommends a gradual return to specie payments, a long loan at four and a half per cent. interest, mentions the case of Cuba, but without advising immediate recognition, maintains substantially the position of Senator Sumner's speech on the Alabama claims, speaks well of the success of the Quaker Indian policy, and urges the repeal of the Tenure of Office law. Various bills have been introduced in the House and Senate, among which are one making it a misdemeanor for any Senator or Representative to recommend any candidate for office, unless his opinion is asked for in writing by the Executive, and one introduced by Mr. Butler for the repeal of the Tenure of Office act.

THE Suez Canal is only one hundred miles in length, uniting points which are but seventy miles apart in an air line. The width of the canal on the surface of the water varies from 190 feet to 492— which is not much like the popular idea of a canal in this country, where uniformity of width is the rule. The depth of water is to be nowhere less than 26 feet, nor more than 33 feet. [It is at present in some places not over 19 feet.] The width of the bottom of the channel varies from 73 to 311 feet. It is calculated that the canal will be navigable for ships of three thousand tons, but none drawing over 24 feet will be admitted. There are no gates or locks. The one hundred miles of the route lies through almost all kinds of soil—solid rock, quicksands, marshes, salt lake basins, etc., and the difficulties of prosecuting the work of construction have been immense. It was begun on the 25th of April, 1859, and it has cost nearly \$60,000,000 in gold. The canal is to remain the property of the company which constructed it, for ninety-nine years. After that time it will pass into the hands of the Egyptian Government. The honor of the achievement belongs incontestably and pre-eminently to Ferdinand de Lesseps.—*Exchange*.

TO CORRESPONDENTS.

J. P. F., *Michigan*.—Picture received: thank you.

J. W. T., *Ohio*.—The pamphlet sent, came duly to hand.

Announcements:

THE ONEIDA COMMUNITY

Is an association living in Lenox, Madison Co., N. Y., four miles from Oneida Depot. Number of members, 202. Land, 664 acres. Business, Horticulture, Manufactures, and Printing the CIRCULAR. Theology, Perfectionism. Sociology, Bible Communism.

WILLOW-PLACE COMMUNITY.

Branch of O. C., on a detached portion of the domain, about one and one-fourth miles from O. C. Number of members, 35. Business, Manufactures.

WALLINGFORD COMMUNITY.

Branch of O. C., at Wallingford, Conn., one mile west of the depot. Number of members, 40. Land, 228 acres. Business, Horticulture, Publishing, Job Printing, and Manufacturing.

SPECIAL NOTICE.

The O. C., and branches are not "Free Lovers," in the popular sense of the term. They call their social system COMPLEX MARRIAGE, and hold to freedom of love only within their own families, subject to free criticism and the rule of Male Continence.

ADMISSIONS.

Members are admitted to the O. C. and branches after sufficient acquaintance; but not on mere application or profession of sympathy. Whoever wishes to join must first secure confidence by deeds. The present accommodations of the Communities are crowded, and large accessions will be impossible till new Communities are formed.

STEEL TRAPS.

Eight sizes and descriptions, suitable for catching House Rats, Muskrats, Mink, Fox, Otter, Beaver, the Black and Grizzly Bear, are made by the Oneida Community, Oneida, N. Y., of whom they may be purchased. Descriptive list and price-list sent on application.

WILLOW-PLACE FOUNDRY.

All kinds of agricultural, machine, and light castings on hand or made to order.

P. O. address, Oneida Community, Oneida, N. Y.

MACHINE TWIST, RIBBONS & SEWING SILK.

Machine Twist, and Ribbons of our own manufacture (Willow-Place Works); also, various brands and descriptions of Sewing Silk, in wholesale quantities, for sale by the Oneida Community, Oneida, N. Y.

MOUNT TOM PRINTING-OFFICE

(WALLINGFORD COMMUNITY), WALLINGFORD, CONN.

Being refitted with new type and press, our establishment is now ready to receive orders for Cards, Circulars, Price-lists, Pamphlets, and the lighter kinds of Job Printing. Particular attention paid to Bronze work and Color Printing for Labels. Orders from abroad should be addressed to

WALLINGFORD COMMUNITY,
Wallingford, Conn.

PICTURES.

The following Photographic Views of the Oneida Community can be furnished on application: The Community Buildings, Buildings and Grounds, Rustic Summer-house and Group, and Bag-Bee on the Lawn. Size of pictures, 8 inches by 10. Price, 75 cents. Various Stereoscopic Views of the Buildings and Groups and Grounds can be furnished at 40 cents each. Views, *cart de visite* size, 25 cents each. Any of the above will be sent by mail, post paid, on receipt of price named. Address, Oneida Community, Oneida, N. Y.

PUBLICATIONS.

HAND-BOOK OF THE ONEIDA COMMUNITY; with a sketch of its Founder, and an outline of its Constitution and Doctrines. 72 pp. octavo. Price, 85 cents for single copy; \$8.50 per dozen.

SALVATION FROM SIN, THE END OF CHRISTIAN FAITH; an octavo pamphlet of 48 pages; by J. H. Noyes. Price, 25 cents per single copy, or \$2.00 per dozen.

THE TRAPPER'S GUIDE; a Manual of Instructions for Capturing Fur-bearing Animals; by S. Newhouse. Second edition; with New Narratives and Illustrations. 250 pp. 8 vo. Price, bound in cloth, \$1.50.

MALE CONTINENCE; or *Self-control in Sexual Intercourse*. A Letter of Inquiry answered by J. H. Noyes. Price, 50 cents per dozen.

BACK VOLUMES OF THE "CIRCULAR," unbound. Price, \$1.50 per volume, or sent (post paid) by mail at \$1.75. The above works are for sale at this office.

MESSES. TRUBNER & COMPANY, Book-sellers, Paternoster Row, London, have our HAND-BOOK OF THE ONEIDA COMMUNITY, and the TRAPPER'S GUIDE for sale. They will receive subscriptions for the Circular and orders for our publications.